portion of the roadway would be approximately 5,300 feet in length. The access road area is visible from some points on SR 14 and in the foreground and middleground from Viewpoints 5 and 6 (nearby residences in the north and east).

3.9.1.3 Alternate 230-kV Transmission Interconnection

The existing conditions for the alternate 230-kilovolt (kV) transmission interconnection would be the same as the existing conditions for the proposed transmission interconnection, because the 230-kV line is in the same physical location as the proposed 500-kV line.

3.9.1.4 Alternate Benton PUD/BPA Transmission Interconnection

The portion of the alternate Benton PUD/BPA transmission interconnection corridor that would extend from the plant site to the existing Benton Public Utility District (PUD) 115-kV line along Christy Road would be located within Plymouth Farm, and would also cross the BNSF railroad tracks. For the majority of its length, the alternate Benton PUD/BPA transmission interconnection would involve rebuilding an existing Benton PUD 115-kV line that traverses predominantly rangeland, undeveloped land, and the Columbia River, to connect with the BPA McNary Substation in Umatilla County. The line would be visible from Viewpoints 5, 6 (nearby residences in the north and east), and 1 (Christy Road).

3.9.1.5 Access Alternative

The alternate construction access road would include the use of Christy Road and would necessitate improvement of a dirt road that extends from Christy Road along the western boundary of Plymouth Farm. From the western boundary of Plymouth Farm, the road would turn east and continue on another dirt road on Plymouth Farm property. This segment of the road would lead to the plant site. The existing dirt roads pass between areas of irrigated orchards.

The alternate operation access road would share the existing Williams Co. compressor station access road for the majority of its length. A small portion of existing dirt road that extends onto the site would be paved as part of this alternative. The alternate construction and operation access roads would be located on land that is flat with uniform vegetation. These roads would be visible from Viewpoints 1 and 2 on Christy Road in the foreground and middleground.

3.9.2 ENVIRONMENTAL CONSEQUENCES

3.9.2.1 Methodology

The methodology for identifying visual impacts and determining their significance is based on the U.S. Department of Agriculture (USDA) Forest Service visual analysis method (USDA Forest Service 1979). The Forest Service visual analysis method includes reviewing land use and topographic data, and conducting field reconnaissance to identify sensitive viewer groups and corresponding representative viewpoints. Impacts to views from the representative locations are then analyzed using visual simulations of the proposed project.

Existing View

Simulated View

Figure 3.9-5
Existing and Simulated Views from Viewpoint 3 on SR 14

Figure 3.9-5 (Continued)

Existing View

Simulated View

Figure 3.9-6
Existing and Simulated Views from Viewpoint 4 in Umatilla County

Figure 3.9-6 (Continued)

Existing View

Simulated View

Figure 3.9-7

Existing and Simulated Views from Viewpoint 5 at a Residence to the East

Figure 3.9-7 (Continued)

Existing View

Simulated View

Figure 3.9-8
Existing and Simulated Views from Viewpoint 6 at a Residence to the North

Figure 3.9-8 (Continued)

Existing View

Simulated View

Figure 3.9-9

Existing and Simulated Views from Viewpoint 7 on the Columbia River

Figure 3.9-9 (Continued)

Photographic simulations of the proposed PGF from each of the seven viewpoints were created. The PGF plant, transmission interconnection, and access road, site features, and Williams Co. compressor station storage tanks were visually developed to scale, as a three-dimensional computer-aided design (3-D CAD) model. Next, site photographs that also displayed context were taken from the selected representative viewpoint locations. The 3-D CAD model viewpoint coordinates were then arranged to match the viewpoint location on the ground (from the photographs), and the two images were digitally edited together. Simulations were completed for each of the seven viewpoints, and a nighttime simulation was completed for Viewpoint 2. The simulations were used to determine the extent to which visual impacts would occur attributable to PGF construction and operation.

The criteria used to determine the level of visual impacts are based on (1) existing land use (expectation of view); (2) existing development (context of view); and (3) viewing distance (i.e., how much of the view is taken up by the proposed project). These criteria are further defined as follows:

- **Existing Land Use** – The Plymouth area has approximately 1,628 acres of industrial land, the majority of which remains undeveloped. Existing nearby industrial developments include the Williams Co. compressor station, which is 2 miles west of Plymouth, and the AgriNorthwest grain facility, which is approximately 1 mile west of Plymouth. The Port of Kennewick owns land designated for future industrial use, located approximately 0.5 mile west of Plymouth and less than 1 mile southeast of the AgriNorthwest grain facility. The *Benton County Comprehensive Land Use Plan* (Benton County n.d.) indicates that land surrounding the Port of Kennewick industrial property and the AgriNorthwest grain facility, between Christy Road and SR 14, is available for future industrial development as well. The plant site is not located on prime or unique farmland, or farmland of statewide or local importance, although farmland and agricultural uses occur near Plymouth and areas that surround the site area.

- **Existing Development** – Typically, the capacity of the existing landscape to accommodate new development depends on slope, vegetation, and existing development. Because the site area is relatively flat farmland, neither slope nor vegetation would likely screen most views of new development. As a result, existing development is the major factor considered in this analysis to understand the extent to which the landscape can accommodate new development.

- **Viewing Distance** – Viewing distance is categorized into foreground, middleground, and background views. Views within 0.25 mile of the plant site are considered foreground views. Middleground views are seen from 0.25 mile to 2 miles of the plant site. Background views are seen from over 2 miles away.

Table 3.9-1 presents the criteria used to determine the level of visual impact at each viewing location and whether the impacts would be high (significant). Since the proposed PGF would be an industrial development situated in a combined agricultural/industrial setting, impacts would likely be low to moderate depending on where views originate, but less than significant (see

Table 3.9-1
Criteria for Assessing Visual Impacts Attributable to the Plymouth Generating Facility

Visual Feature	Foreground	Middleground	Background
Proposed industrial development in a prime or unique farmland setting	High (Significant) Visual Impact	Moderate Visual Impact	Low Visual Impact
Proposed industrial development in a combined agricultural/industrial setting	Moderate Visual Impact	Low Visual Impact	Low Visual Impact
Proposed industrial development in an industrial setting	Low Visual Impact	Minimal Visual Impact	No Visual Impact

Section 3.9.2.3.1). Using this methodology, the primary visual impact concerns would be views of the PGF in the context of existing development and terrain, from foreground, middleground, or background views of PGF.

To assess the impact of light and glare, a comparison of project lighting at night with ambient conditions was made. If nighttime lighting altered ambient lighting such that use of adjacent properties would be affected, impacts were considered to be high (significant). Examples of high (significant) impacts would include preventing or disturbing sleeping patterns in residential areas or creating points of visual interest that would distract drivers on nearby roads.

3.9.2.2 No Action Alternative

The No Action Alternative would not result in any visual impact because the PGF would not be constructed and future views would be the same as the existing views.

3.9.2.3 Proposed Action

3.9.2.3.1 Plant Site

Construction

Construction of the PGF would have short-term impacts on visual quality in the site area. Equipment such as cranes and scaffolding, dust, increased construction traffic on existing roads, and night lighting and glare would be visible from all viewpoints during different periods of construction. Viewers from Viewpoints 5 and 6 (see Figures 3.9-7 and 3.9-8) would have foreground views of plant construction (including night lighting and glare), and would therefore experience high visual impacts. However, because construction activities would be temporary, the overall visual impact is expected to be low. Viewers from other viewpoints would see PGF construction in the middleground or background and experience low and, therefore, less than significant impacts.

Operation

The PGF would be most visible from viewpoints located less than 2 miles from the plant site that show the PGF in the foreground. From viewpoints over 2 miles from the plant site, the plant